

A Comparison of Family Planning Programs in Iran and Turkey

N. R. E. FENDALL, M.D. (London), D.P.H.

IRAN AND TURKEY are neighboring countries sharing almost two centuries of common history as well as the Islamic culture. In form of government, economic resources, and social development, however, they differ substantially. A comparison of their family planning policies and services reflects these differences (and others) in efforts to achieve population control in two developing nations (1-4).

In 1963, Iran initiated a reform program to reduce inequalities of wealth and social position among the people. The various revolutionary corps, namely the literacy, health, extension and development, and women's corps were formed to implement these social reforms and development activities—these are collectively known as the White Revolution. Although women were not obliged to wear the veil after 1936, emancipation in the rural areas still is not as advanced as in the urban centers.

Turkey is a more open society with free mobility downward as well as upward. The switch from written Arabic to romanized Turkish has greatly improved the state of literacy. Women became eligible in 1930 to vote in municipal elections.

In spite of these trends to modernization, the status of women is still reflected in the differences between men and women in literacy rates (references 5-7 and table 1). The participation of women in professions such as medical, nursing, and midwifery in both Iran and Turkey is also relatively low.

Aggravating the disadvantaged state of better educated women is their maldistribution—most are in urban areas, whereas most of the population is rural—their employment in jobs that are not consistent with their training, and the loss of their services as they stop working for a variety of reasons.

The total output of female graduates of schools of nursing and medicine barely equals that of male physician graduates and does not keep pace with the population growth. The ratio of physicians to nurses is the reverse of that of industrial countries of one physician to two or three nurse-midwives. Coupled with the prevalent cultural and traditional tendency of women to seek advice and attention from those of their own sex in matters related to sex and birth, the implication for

Dr. Fendall is professor of tropical community health at the Liverpool School of Tropical Medicine. He was formerly regional director for Africa and the Middle East of the Population Council. Tearsheet requests to N. R. E. Fendall, M.D., Department of Tropical Community Health, Liverpool School of Tropical Medicine, Pembroke Place, Liverpool L3 5QA England.

educational policies is clear if family planning programs are to progress. Either the output of female nurses and physicians must increase dramatically or recourse must be made to training female auxiliary nurses to give family planning services.

Economic Development

Economically, Iran and Turkey belong to the group of countries with per capita incomes of less than US \$500 (Turkey US \$353, Iran US \$283) though relatively well along the road to development. Both countries have evolved plans for long term economic development. In 1968, Iran started its Fourth Economic Development Plan, and Turkey began its Second Five-Year Plan the same year.

Although in both countries industrial development is given high priority, substantial investments are also being made in agriculture. Iran's plan aims at increasing agricultural output by 5 percent per year through farm mechanization and improvement of soil fertility and increased irrigation. Turkey expects an increase in agricultural production of 4.4 percent per year by greater use of fertilizer and an increase in irrigation schemes.

In 1966-67, wheat was exported for the first time in Iran in many years. Turkey, from being an exporter of wheat until early 1950, has become an importer. In Turkey the percentage of national income derived from agricultural products has dropped steadily. By 1967 it was only 15 percent of the gross national product, although 75 percent of the population in 1968 was engaged in agriculture. Despite agricultural reforms, production of food in Turkey is, at best, on the borderline of self-sufficiency and the government has been relying on imports of wheat to boost the per capita calorie level. The present per capita calorie intake is 3,110 for Turkey and 2,050 for Iran (8).

The new seed varieties of wheat, so successful in South Asia, are less useful in Turkey because they are best fitted for the coastal areas where the economies favor the production of tobacco, cotton, tea, and fruits. Thirty-four percent of Turkey's land is cultivated. Iran's agricultural output is severely restricted by the amount of arable land available (12 percent) and potential water resources for use in irrigation schemes.

Iran's development has been financed largely from earnings from oil which provide nearly 50 percent of government revenues and 75 percent of

foreign exchange. Iran's programs receive little international assistance, and the economic outlook is so good that U.S. economic aid has not been necessary since 1967-68.

Turkey was one of the first recipients of U.S. assistance outside the Marshall Plan. The principal impact of foreign assistance has been to relieve the current foreign exchange shortages, although originally the intention was to use it for industrial development. Even now, Turkey continues to receive substantial foreign assistance as nonproject aid.

Demographic Profile

The total area of Iran is twice the size of Turkey, and Turkey is approximately the size of Texas and Louisiana combined. Iran's population is slightly smaller than that of Turkey. "Biological" population density, however, is higher in Iran with 128 inhabitants per square kilometer compared with Turkey's 116.

In 1956 Iran took the first census of population and the second in 1966. Turkey has taken a census every 5 years since 1935. From these 5-year censuses and studies of birth rates, it was determined that the fertility trends in Turkey were declining. Child mortality trends and age distribution of the population indicates a decline in the birth rates, from the high '40's per 1,000 in the decade of the 1930's to the low '40's in the present decade. Iran has a high fertility rate, with no evidence of a falling birth rate, coupled with a low and still falling mortality rate.

Both Iran and Turkey lack adequate systems of national vital statistics registration sufficient to provide accurate data for measurements of fertility changes. The average annual growth rate of population has been estimated as being 3.0 percent for Iran and 2.7 percent for Turkey. This rate means that the population will double in 23 years in Iran. According to Momeni (9), the urban growth rate in Iran in 1956-66 was 4.98 percent and in 14 years it will double. He also forecast a population of 66 million in the year 2000, of which 50 million would be urban. The population will double in Turkey in 26 years at the present growth rates. This rapid population growth is ascribed mainly to mortality declines. From the foundation of the Republic until 1965, Turkey's population policy had been pronatalist.

In both countries, about 45 percent of the total population is under 15 years with less than 5 percent of the people over 60. An insignificant

proportion of women remain single by age 50. The average age of first marriage for women is estimated to be 18 years in Iran and 19 in Turkey. Life expectancy at birth in Iran is 45 years and in Turkey 53.7 years.

Some recent data on socioeconomic and demographic conditions in Iran and Turkey are given in table 1.

Technical and Political Support

Iran and Turkey are both aware of the socioeconomic problems of rapid population growth. The Third Economic Development Plan of Iran recognized that "for both economic and general welfare considerations, in the next decade or two, family planning should be popularized and it should constitute one of (our) important welfare programmes in the future plans." Turkey's First Five-Year Plan admitted that "there is an overriding need for a change in the population policy of the past" (which was pronatalist) and "if fertility does not change, efforts must be increased and greater sacrifices accepted in order to raise per capita income by the same rate, whereas a fall in fertility will enable a higher rate of growth in per capita income or will lessen the burden of development."

Financial provisions for the intensification of family planning programs were made in both the Fourth Economic Development Plan of Iran (10) and the Second Five Year Plan of Turkey (11). To assist in identifying the problem and its extent, the governments of Iran and Turkey requested the advice of Population Council experts. Recommendations on the course of action in controlling population growth were submitted to the government of Iran in 1966 and to the government of Turkey in 1963. The recommendations have much in common.

Iran selected the historic Persepolis flower with petals enclosing a family of four as its family planning symbol (12), while Turkey has as yet adopted no such symbol.

Subsequently in 1967, the Shahanshah of Iran joined with 29 other world leaders to sign the Declaration of Population (13). His strong and consistent support for family planning has been repeatedly indicated in messages at various official functions. Turkey did not sign the declaration, and the attitude of its political leaders was cautious towards family planning.

There were no legal hindrances in Iran to immediate implementation of a family planning pro-

gram as no contraceptive legislation existed, while in Turkey a 2-year delay occurred before a law (No. 557) could be promulgated in April 1965 to abrogate the existing pronatalist law.

Article 1 of the Turkish law on population planning states "individuals may have as many children as they wish whenever they wish. This can be ensured through preventive measures taken against pregnancy but neither castration, sterilization nor the termination of pregnancy may be performed unless medically necessary."

Table 1. Basic information on demographic and socioeconomic conditions in Iran and Turkey

| Facts | Iran | Turkey |
|---|------------|------------|
| Total population, mid-1970..... | 28,400,000 | 35,600,000 |
| Percent population, urban..... | 39 | 34 |
| Density per sq. km. of total land area..... | 16 | 43 |
| Density per sq. km. of arable cultivated land..... | 123 | 116 |
| 1967 total Gross National Product (million US\$)..... | 7,439 | 11,540 |
| 1967 Gross National Product per capita income (US\$)..... | 283 | 353 |
| 1968 annual growth rate of GNP (percent)..... | 10 | 6.5 |
| 1968 annual growth per capita GNP (US\$)..... | 7 | 3.7 |
| Percent literate..... | 1 29 | 1 49 |
| Percent males literate..... | 1 40 | 2 64 |
| Percent females literate..... | 1 18 | 2 33 |
| Newspaper circulation in 1968 per 1,000 population..... | 15 | 51 |
| Radio receivers in 1968 per 1,000 population..... | 65 | 85 |
| Television receivers in 1968 per 1,000 population..... | 5 | 0.08 |
| Annual growth rate total population, percent..... | 3.0 | 2.7 |
| Annual growth rate urban population, percent..... | 8.0 | 4.1 |
| Annual growth rate rural population, percent..... | 1.8 | 1.7 |
| Fertility rate, urban..... | ..... | 176 |
| Fertility rate, rural..... | ..... | 254 |
| Crude birth rate per 1,000..... | 48 | 43 |
| Crude death rate per 1,000..... | 18 | 16 |
| Infant mortality rate per 1,000... .. | 150 | 161 |
| Life expectancy at birth (years)... | 45 | 53.7 |
| Population ratio per physician.... | 3,820 | 2,707 |
| Population ratio per nurse-midwife..... | 8,280 | 6,033 |
| Population ratio per hospital bed..... | 890 | 550 |
| Number medical schools, 1969... .. | 7 | 8 |
| Average annual graduates, 1969... .. | 611 | 900 |
| Number schools of public health... .. | 1 | 1 |
| Number of schools for nurses and midwives, 1969..... | 15 | 24 |
| Average number graduates, 1969... .. | 321 | 750 |
| Number of schools for auxiliary nurses and midwives..... | 41 | 25 |

¹ 7 years and older.

² 6 years and older.

Subsequently in 1967, the Ministry of Health introduced by administrative regulations (Official Gazette No. 12637, 3 July 1967. Decision No. 6/8305) more liberal abortion practices, permitting abortion for a variety of specific medical reasons that included a foreign body in the uterus, which permitted termination of pregnancy because of failure of an IUD.

In Iran, legal abortion may be performed only if it is "imperative to insure the patient's health." Hospitals were cautioned on unnecessary abortions and regulations have been recently promulgated by the Iranian Medical Disciplinary Board that before performing an abortion, two physicians should be consulted and the board should be notified of each operation.

In both countries, religious leaders have raised no serious objection to family planning although individual mullahs and imams have objected. Opposition also appears to exist among political, military, and medical circles in Turkey.

Implementing Family Planning

The National Family Planning Program came into being in Turkey in October 1964 with the appointment of the Director General of Population Planning in the Ministry of Health and in January 1967 in Iran with the nomination of an Under Secretary for Health and Family Planning.

Aim. The target of the program in Iran is to have 500,000 new acceptors of family planning

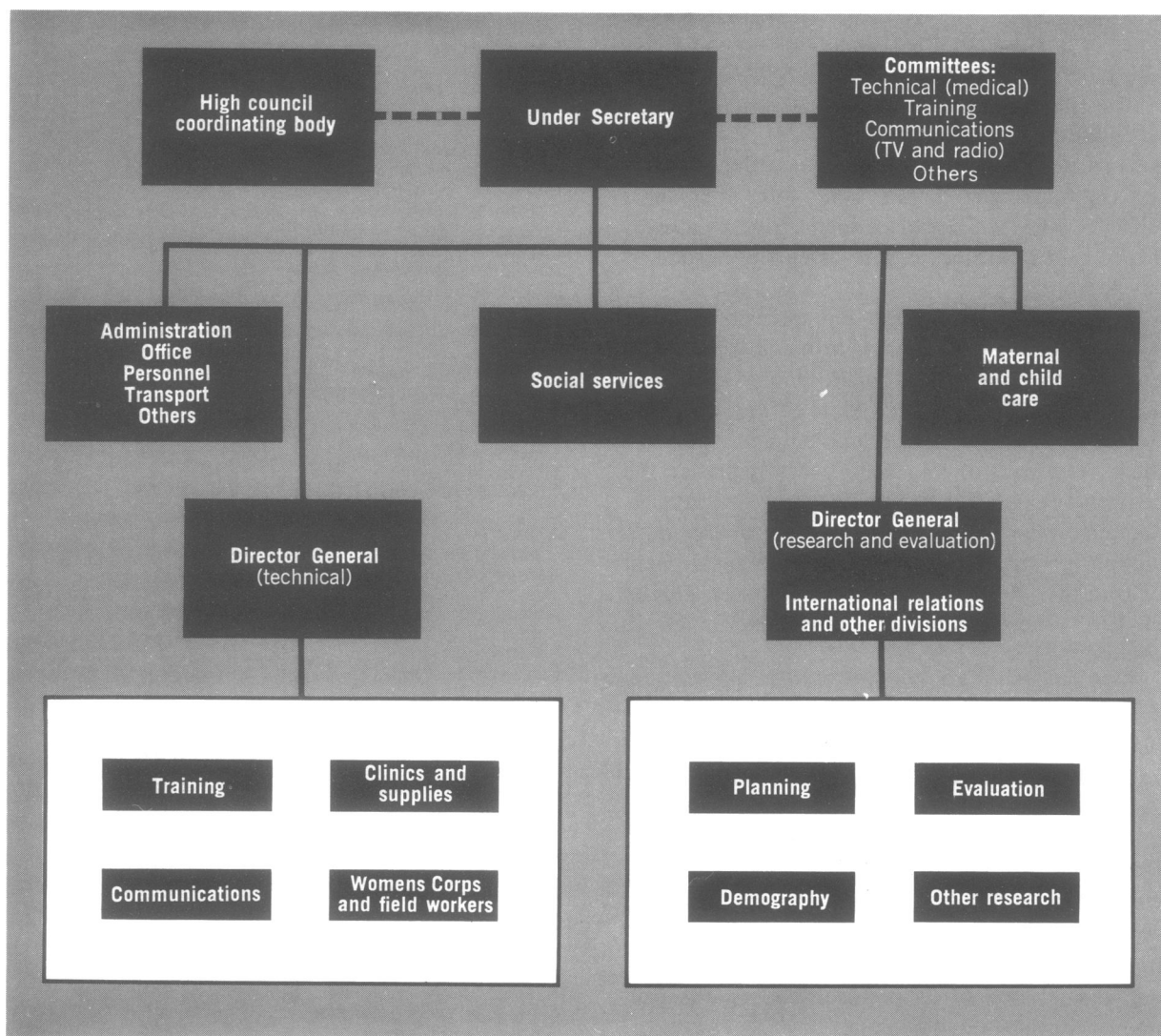


Figure 1. Organization of the family planning division, Ministry of Health, Iran

methods by 1972. The stress is on young mothers and child spacing rather than on family limitation. In Turkey, the stress is on making family planning services available to 5 percent of married women of childbearing age each year, or to a total of 2 million women by 1972.

Organization. Administratively, the program of each country is located within the Ministry of Health, but in Iran the chief administrator is an Under Secretary; whereas, in Turkey, he is one of several Directors General. This difference may not seem important, but when it is realized that the Under Secretary in Iran has direct access to the

Minister of Health whereas the Director General in Turkey has to pass through an Assistant Under Secretary and the Under Secretary to approach the Minister, the significance in influencing policy decisions will be appreciated.

In Iran, the Under Secretary is responsible for family planning and maternal and child health services, whereas in Turkey this fusion, while contemplated, has yet to be accomplished. Furthermore, the Under Secretary in Iran has greater authority over the provincial health services, while in Turkey the Director General for Population Planning must work through the Directors Gen-

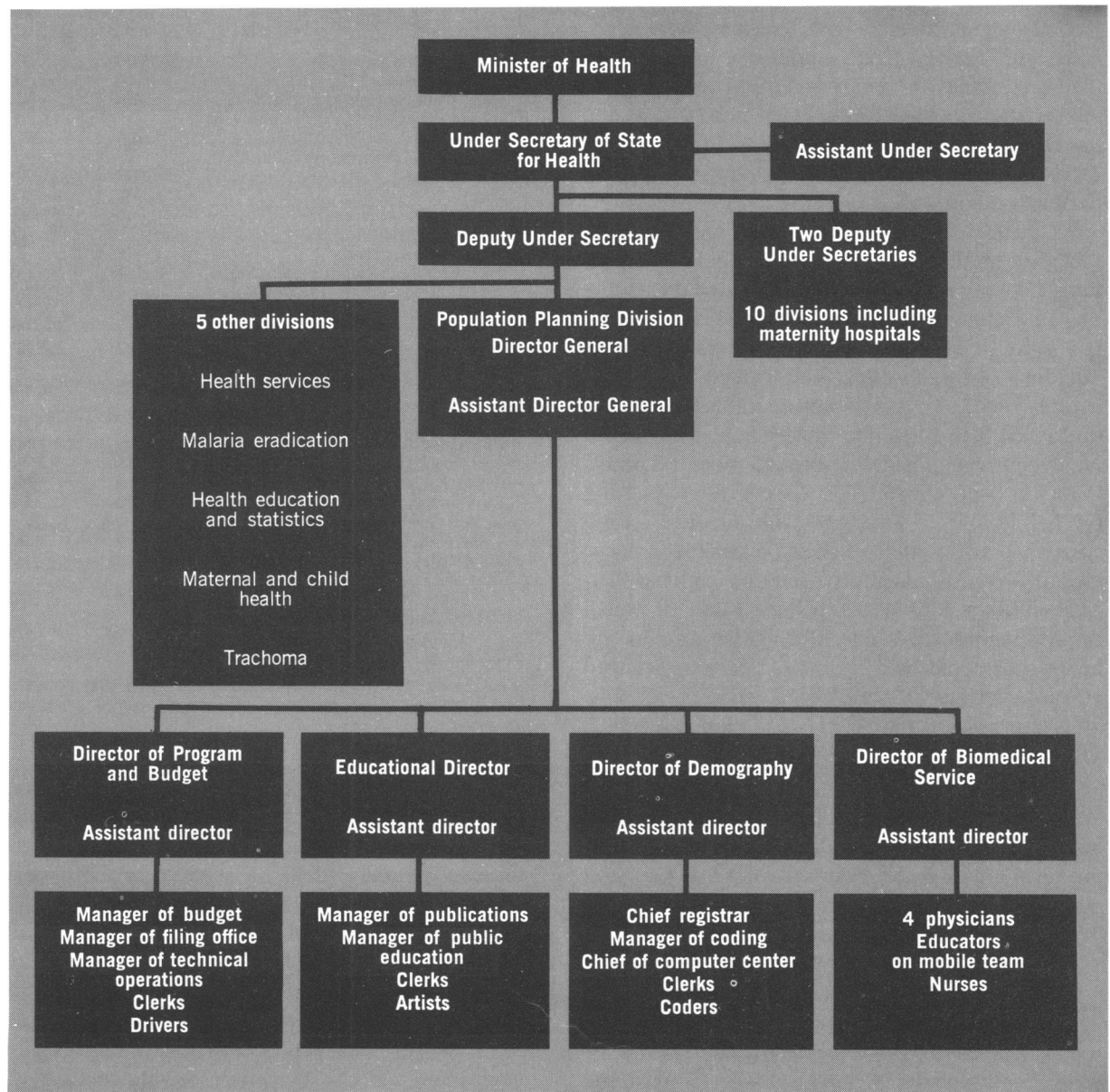


Figure 2. Organization of the division of population planning, Ministry of Health, Turkey

eral for Maternal and Child Health Services and for Provincial Health Services.

Figures 1 and 2 present the central organization of the programs in both countries. The main features of the two programs are summarized numerically in table 2.

In the provinces of Iran, five physicians with postgraduate training in family planning have been appointed to the posts of provincial directors of family planning. In Turkey, regional directorates of population planning have been established in seven of 16 regions. Legislation also exists to create directorates of population planning in every province.

Operational aspects. At the peripheral level, Iran and Turkey have established fixed family planning clinics in urban and rural areas. These clinics are located in hospitals, health centers, and maternal and child health centers. Mobile teams serving remote areas supplement them. Even so, outreach is not total.

In Turkey, although fixed clinics have been established in all 67 provinces, the Population Planning General Directorate has relied heavily upon the development of specific family planning mobile units. It has experimented with various combinations of one through three vehicles with educational, medical, and followup staff. Though full evaluation has yet to be undertaken, the government considers their cost-benefit more favorable than the fixed clinics (TL 23 per IUD insertion by mobile unit as compared with TL 66 by fixed clinics). Part of the reliance on mobile units is explained by administrative factors and part because Turkey has 50,000 villages, half of which are not readily accessible. Even snow tractors are being considered as a means of reaching isolated villages during the prolonged winters. Mobile units are responsible for 12–15 percent of IUD acceptors.

Iran has used the mobility of the Health Corps to establish and run 397 family planning clinics which, when combined with all health activities in the rural areas, reach about one-third of the rural population. They supplement the work of the fixed clinics but again vast areas remain unserved or inadequately serviced. Family planning services in Iran have been integrated into maternal and child health services since February 1970.

Participation of other agencies. In Turkey official family planning services are administered solely by the Ministry of Health; however, in Iran a variety of ministries and organizations partici-

Table 2. Family planning programs in Iran and Turkey

| Facts | Iran | Turkey |
|--|-----------|-----------|
| Personnel employed in government health services: | | |
| Physicians..... | 5,051 | 4,500 |
| Qualified nurses and midwives.... | 2,204 | 2,411 |
| Auxiliary nurse-midwives..... | 2,700 | 3,104 |
| Number of physicians working full-time in family planning in government..... | 15 | 13 |
| Full-time workers—all types..... | 250 | ..... |
| Percent of women physicians in the country..... | ..... | 15 |
| Family planning clinics: | | |
| Fixed..... | 935 | 512 |
| Mobile..... | 397 | 3.7 |
| Expenditures in family planning, 1969: | | |
| Government (in US\$)..... | 1,276,000 | 1,475,000 |
| Bilateral sources (in US\$)..... | 93,000 | 190,000 |
| Per capita per annum (in US\$)... | 4.9 | 4.8 |
| Cost per acceptor of family planning (US\$)..... | 6.6 | 41.3 |
| Number of acceptors (cumulative): | | |
| All methods..... | 346,500 | 223,000 |
| IUD..... | 36,500 | 198,000 |
| Oral contraceptives..... | 310,000 | 25,000 |
| Other methods..... | (1) | (1) |
| Post partum program: | | |
| Number of participating hospitals..... | 1 | 1 |
| Cumulative number of acceptors until March 1970..... | 19,909 | 26,171 |
| Direct acceptors..... | 6,611 | 3,394 |
| Indirect acceptors..... | 13,298 | 22,777 |
| Acceptance rate per million population..... | 12,375 | 6,371 |
| Number of staff receiving family planning training: | | |
| Physicians..... | 1,193 | 841 |
| Nurses and midwives..... | 245 | 20 |
| Other health personnel..... | 1,624 | 5,500 |
| Lay personnel..... | 38,500 | nil |
| Number of fellowships granted by the Population Council..... | 9 | 15 |
| Mass media: | | |
| Film on family planning produced locally..... | 1 | 1 |
| Official bulletins in family planning..... | 2 | 2 |

¹ KAP studies in Iran and Turkey showed that conventional contraceptive methods have been widely practiced in both countries.

pate. (The Ministry of Health has recently turned its public hospitals over to the medical schools, the Red Lion and Sun, and the local health committees.) Family planning services are provided not only by the Ministry of Health but by the Ministry of Labor and Social Welfare, the Social Insurance Organization for Industrial Workers, by the Institute for the Protection of Mothers and Children, and by voluntary organizations, such as the Red Lion and Sun Society, the Women's Organization, and also by certain private companies, such as the National Iranian Oil Company, for their own employees. The extent to which the



Remote Turkish village in Kayseri Province

D'Turgut Mettiner, Director General of Turkish Family Planning, talks to a mobile unit team



private sector of medicine supplies family planning services is not known.

The Family Planning Association of Iran was officially registered with the IPPF (International Planned Parenthood Federation) in 1969, and Queen Farah has given it her patronage and generous support. In addition to headquarters and clinics in Teheran, the association has branches and clinics in Yazd, Rezai, and Shahrod. It has lobbied in support of the resolution on family planning adopted by the International Conference on Human Rights held in Teheran in 1968. Training classes in family planning for volunteers have been conducted by the association for some years.

In addition, many quasigovernmental bodies are actively participating in family planning work. Iran's tradition of paramilitary service for males and females, embodied in the spirit of the Health Corps and other corps, makes a psychological difference in the attitudes of the people in Iran that is difficult to evaluate or contrast with that of Turkey's purely military services for males.

The Family Planning Association of Turkey was formed in 1963 and has extended to 25 branches in the provinces. Whereas it has only two clinics, it has recently stepped up educational activities. It has established three committees: (a) planning and organization, (b) public relations and education, and (c) medical. The branches are mostly in the eastern provinces, and mobile educational teams concentrate on village activities.

During 1969, some 19 seminars were held; 738 villages were visited; 135,000 persons were exposed to education; 10,000 acceptors of contraceptives were gained; and a further 10,000 were examined and treated medically. The Turkish De-

velopment Foundation, established in 1968, has been active in promoting conventional contraceptives, concentrated at the present in a study area of eight villages in Tarsus Province.

Methods of family planning. In Iran, contraceptives are provided free through the network of family planning clinics, hospitals, and mobile teams run by the government and cooperating agencies. The most popular method of contraception is the use of oral contraceptives, although when the program began the IUD was first choice. Free condoms are also distributed by the clinics.

The official family planning program of Turkey is predominantly based on IUD's which are free. Oral contraceptives are not only free in the official program but are also sold through commercial channels (a few are distributed through official clinics), and they are gaining in popularity. No regulations are enforced in Iran regarding the sale of pills, but in Turkey oral contraceptives are sold only by medical prescriptions that are valid for 3 months, although in actual practice pills are readily obtainable.

Since August 1967, to promote the use of IUD's, Turkey has offered incentives to physicians and helpers working in family planning: for each IUD insertion, a physician receives TL 10 (US\$ 1.10) and the nurse-midwife TL 5 (US\$ 0.55).

In western Turkey, condoms are sold in all drug stores; the sale of foam tablets is reported to be small but the Turkish Development Foundation, as a result of a pilot project in a southern coastal area, is considering expanding their use by manufacturing them. The Foundation is also carrying out a study in eight villages designed to test the impact of intensive educational effort on the increased usage of conventional contraceptives.

According to a survey (14,15) on family structure and population problems, undertaken by Hacettepe University Institute of Population Studies in 1968, 41 percent of married women of childbearing age in Turkey have at some time experimented with some kind of contraception, including coitus interruptus and douches. In Ankara, Istanbul, and Izmir, this percentage is 71.7; in other towns 47.4; and in villages 21.0. These facts indicate that family planning activities are concentrated in predominantly urban areas to date.

Because of religious teaching, Iran and Turkey do not have any legislation permitting voluntary vasectomies and tubal ligation. The practice of abortion, however, is believed to be widespread in

both countries. This statement is based on the sizable number of hospital patients admitted subsequent to abortion, who occupy an estimated one-fourth to one-third of beds in the gynecological sections of hospitals. In Turkey, an abortion performed for medical reasons is said to cost TL 300 (US\$ 33.33). An interesting observation from the aforementioned survey is that whereas abortion as a primary method of birth control appears to have increased among all married women, it appears to have decreased among women who have ever used contraceptives.

Whatever the prevalence and popularity of abortion, it must always be regarded as a cure rather than as a prevention, and it is always more expensive than contraception. Notwithstanding this, where abortion is prevalent, it would seem appropriate to introduce the safer method of the aspiration technique rather than relying upon cur-ettage.

Post partum program. Both Iran and Turkey have a post partum program limited to the main maternity hospital located in the capital of each country. The Farah Maternity Hospital in Tehran, Iran, averages about 40,000 obstetrical patients per year, and the Ankara Maternity Hospital in Turkey averages about 12,000 patients per year.

Since the inception of the post partum program in Turkey in May 1966 and that of Iran in March 1968, some 7 percent of post partum patients of Ankara Maternity Hospital and 8 percent of the patients in the Farah Maternity Hospital in Tehran have accepted the contraceptive services offered. In addition, the programs provide family planning services to nonhospitalized post partum women. There were seven times as many indirect acceptors as there were direct acceptors at the Ankara Maternity Hospital. In Farah Maternity Hospital, indirect acceptors were only twice the direct acceptors.

Indirect acceptors are defined as women from the community who accept contraception as a result of information about or post partum family planning services. Direct acceptors, in contrast, accept contraception as result of direct counseling during pregnancy and childbirth at an institution.

In Iran, of total direct and indirect acceptors in the post partum program, 81 percent use pills and 16 percent use the IUD. In Turkey, 78 percent of total acceptors accepted the IUD and 20 percent the pill. Choice appears to reflect the outlook of

the service personnel more than that of the acceptors.

Supplies. Turkey, restricted in its foreign exchange and with heavy excise duties on imports, is manufacturing both IUD's and oral contraceptives locally using imported raw materials. They can manufacture 20,000 IUD's daily, and licenses to manufacture oral contraceptives have been granted to five firms, subject to compliance with evaluation procedures set by the High Medical Council. Condoms are still being imported although subject to high excise levies. Manufacture of foam tablets locally is being contemplated.

Iran has no foreign exchange problem and therefore relies entirely on external sources for its supply of oral contraceptives.

Coordination. In Iran, with the participation in family planning activities of many governmental and quasi-governmental bodies and voluntary and charitable agencies, the need to coordinate the work of these organizations is apparent. A High Council of Family Planning was created in 1966 under the chairmanship of the Under Secretary for Health and Family Planning for the formulation of the general policy and for the implementation of the program. Committees of the council on technical, educational, social, communications, training, and demographic aspects were also formed. The council and the various committees include representatives of participating ministries and organizations. At the provincial level, similar coordinating councils are organized under the chairmanship of the provincial governors.

Turkey formed an Advisory Committee on Family Planning to the High Medical Council consisting of nine obstetric specialists which met annually in 1967 and 1968. The committee has considerable influence in determining to what degree delegation of skills is permitted. In addition, an intergovernmental committee on family planning, comprised of the Under Secretaries of State for Education, Agriculture, Labor, Village Affairs, Defense, and Industry, was established in 1967 to review Turkey's population problems and to deal with interministerial cooperation. This committee is, however, not active.

Budget

Data on governmental expenditures for family planning as given in table 3 should be interpreted with caution since they do not reflect total efforts put into these activities. The Iranian figures do not include expenditures incurred for the family

planning activities of the Revolutionary Corps or those of other ministries. Allocations in Turkey were based on estimated expenditures of TL 0.5 (US 5 cents) per head in the Second Five Year Development Plan, requiring TL 15 million in 1968 increasing to TL 17 million by 1972. Expenditures for family planning services for military and families of railway employees are additional.

As a brief prospect for the future program in Iran, the government has allocated US\$ 4.6 millions for the financial years 1970-72 and has included in the Fifth Economic Development Plan an allocation of US\$ 26.3 millions. Compared with the amount of US\$ 6.7 millions provided in the Fourth Economic Development Plan, this signifies their intention to expand the program dramatically.

Major international donors are indicated in table 4. It will be observed that whereas Turkey has received considerable external assistance, the

Table 3. Government allocations for family planning programs since inception (US\$)

| Year | Iran | Turkey |
|--------------|------------|-----------|
| 1964..... | ..... | 420,000 |
| 1965..... | ..... | 585,000 |
| 1966..... | ..... | 755,000 |
| 1967..... | ..... | 844,000 |
| 1968..... | 600,000 | 1,944,000 |
| 1969..... | 1,276,040 | 1,475,000 |
| 1970..... | 1,467,200 | 1,870,000 |
| 1971..... | 1,619,000 | ..... |
| 1972..... | 1,704,280 | ..... |
| 1973-78..... | 26,300,000 | ..... |

NOTE: Recently the Turkish lire was devalued from 1 US\$=9 TL to 1 US\$=15 TL.

Table 4. Bilateral assistance to national family planning programs since inception to December 1969 (US\$)

| Source | Iran | Turkey |
|--|-----------|-------------|
| Population Council..... | \$357,000 | \$1,446,000 |
| Ford Foundation..... | 0 | 375,000 |
| Swedish International Developmental Agency..... | 0 | 200,000 |
| Rockefeller Foundation..... | 0 | 250,000 |
| U.S. Agency for International Development..... | 0 | 571,000 |
| International Planned Parenthood Federation..... | 50,000 | 68,000 |
| Pathfinder Fund..... | 0 | 2,600 |
| Regional Cooperation for Development..... | 2,200 | 0 |
| Central Treaty Organization..... | 2,000 | 0 |
| Total..... | \$411,200 | \$2,912,600 |

program in Iran has benefited minimally. The United Nations Children's Fund assistance to maternal and child health activities (approximately \$984,000 for 1960-66) is omitted from the table.

Acceptance of Family Planning

The cumulative number of acceptors since the inception of the two programs is given in table 5. Of the total number of ever acceptors of family planning services in Iran, 11 percent have opted for the IUD compared with 89 percent for the pill; Turkey's program has the reverse, 89 percent of total acceptors opting for the IUD and 11 percent for the pill.

In Iran, the share of acceptors attributable to various organizations other than the health services is not known but in terms of initial clients attending clinics, the breakdown is as follows for 1969-70 (12-month period in Iranian year 1348):

| <i>Organization</i> | <i>Number</i> |
|-------------------------------------|---------------|
| National total | 1,499,413 |
| Women's organizations | 42,880 |
| Social Insurance Organization | 39,308 |
| Farah post partum program | 84,539 |
| Armed forces | 82,181 |
| Health Corps | 61,266 |
| Industry | 34,709 |
| Others | 24,500 |

Thus in Iran, the major input stems from the Ministry of Health with other organizations contributing a significant 21 percent towards the total. But there are other important contributions by these organizations such as the change in insurance policies. The social insurance regulations have been changed from favoring the large family to paying for three children only.

In Turkey, the cumulative contributions of the mobile units (27,616 IUD insertions) and the Ankara Maternity Hospital's post partum program (26,171) amount to slightly more than a quarter of the total figures. The Family Planning Association in 1969 contributed 10,324 new acceptors (3,893 had IUD's inserted, 5,093 received pills, and 1,328, foam tablets) to the program.

Education and Training

Both countries have benefited from a considerable number of travel grants and short and long overseas training fellowships. Travel grants have exposed politicians, administrators, and technical personnel to programs elsewhere in the world. Fellowships have enabled key family planning personnel to attend summer courses in family

Table 5. Number of acceptors of family planning services offered by national programs since inception to December 1969

| Method | Iran (1967-69) | | Turkey (1965-69) | |
|------------|----------------------|----------------------|------------------|----------------------|
| | Ever accepted | Current users | Ever accepted | Current users |
| IUD..... | 36,500 | 20,000 | 198,000 | 130,000 |
| Oral..... | 310,000 ¹ | 193,000 ² | 25,000 | 118,000 ¹ |
| Other..... | (³) | 2,100 | (³) | (³) |
| Total..... | 346,500 | 215,100 | 223,000 | 248,000 |

¹ Includes commercial sales.

² Official program only.

³ Unknown.

planning and longer academic sessions leading to the master's degree in public health. Whereas Turkey has opted to place emphasis on travel grants and short summer courses, Iran has preferred to concentrate on longer academic studies.

Within their own boundaries, each country has concentrated upon developing relatively short exposure courses to family planning, varying in length from 2 days to 4 weeks: for example, in Turkey, 3 days training for obstetric-gynecology specialists and 3 weeks for general physicians. Within a short span of time, Iran has exposed considerably more field personnel to training than Turkey. The difference in numbers trained partly reflects the organizational approaches of the two countries. Turkey has concentrated on training of health personnel only while Iran has spread its efforts over a much wider range of disciplines, including lay persons.

Iran has established two specific training centers in Teheran, at Firouzgar and Dreyfus clinics, and a model demonstration and training center at Isfahan, a provincial capital. National and international seminars have also been a popular means of disseminating knowledge in both countries.

In the realms of higher academic education, Iran in 1968 introduced family planning as both a basic course and an optional elective at its School of Public Health in Teheran. The Institute of Social Studies and Research of Teheran University has been conducting studies on the census results, particularly of fertility trends, and offers courses to sociology students in demography. Isfahan University has established an office of population which offers a 32-hour course as an interdisciplinary option to all students.

At Pahlavi University in Shiraz, courses in demography and research and minimal instructions

to medical students in contraceptive practice are offered. In conjunction with the provincial health office, training in family planning for nurses and others is available. The provincial health office at Shiraz is also planning a training course in family planning and maternal and child health for auxiliary personnel of primary schools; the graduates to be attached to nomadic tribes.

In Turkey, an Institute of Population Studies was established in 1966 at Hacettepe University. A 2-year course leading to a master of arts degree in population dynamics commenced in the fall of 1967. In addition, the institute conducts studies to measure population and family changes and publishes a quarterly bulletin of family planning activities and population problems in Turkey. The Institute of Community Medicine, Hacettepe University Medical School, has a rural demonstration health project to train medical students which includes population studies and family planning activities.

Ataturk University Medical School acquaints students with communication aspects of family planning during their community work in rural areas. Other medical schools offer minimal training in contraceptive technology. Both Ankara and Istanbul medical schools intend to provide a 3-credit-hour course each year in the last 3 years of medical education in family planning methods.

In addition, during their obstetric and gynecological internship, medical students are taught the clinical aspect of family planning, including inserting of IUD's. The school of public health (which is effectively a service unit) offers short courses in family planning to Ministry of Health personnel. A bill presently before Parliament proposes to introduce a 1-year compulsory rotating internship for new medical graduates. Within this year, family planning will be incorporated in the public health and obstetric-gynecology assignments.

As regards the training of auxiliary midwifery personnel, a 3-month course was held in 1969 in Ankara Maternity Hospital covering cervical cytology and clinical aspects of family planning, including insertion of IUD's. Additionally, at Izmir, village midwives receive some training in family planning. The Family Planning Association is also interested in initiating a training center for educational aspects of family planning.

Social workers in Iran are educated at the School of Social Work, Teheran, which inculcates family planning into its diploma and degree programs. In the first year basic physiology of preg-

nancy is taught, in the second year social aspects, together with family planning field and clinic work. The degree program requires further family planning fieldwork during the third and fourth years. This school has also carried out a remarkable piece of social work on prostitution in Teheran, including family planning knowledge and practice.

School Programs

In 1966, the Iranian Parliament decreed that family planning should be incorporated into the educational system on a national scale. A high school curriculum has been developed and textbooks for the sixth through 12th grades contain educational material on population control. The material is incorporated in subjects such as geography, home economics, and social science. Recommendations are being considered for further inclusions. In Turkey, although a chapter on family planning has been prepared for a biology textbook for secondary schools, it has yet to be officially approved and printed.

Communications and Public Information

Promoting communications and information in both Iran and Turkey is hampered by conditions common to all developing nations—a high illiteracy rate, inaccessible villages, rural populations, entrenched beliefs, limited coverage by mass media (such as newspapers, radio, and television), and shortages of trained personnel.

Both countries have initiated audiovisual centers to design and produce posters, pamphlets, instructional material, flipcharts, filmstrips, storybooks, and films. Both produce a high quality family planning news bulletin in the national and English languages. One basic difference is that whereas the Iranian government can concentrate almost entirely on the public informational aspect, the Turkish government has to devote considerable time to influencing the highly educated to the advantages of fertility control. Examples of such efforts are "The Impact of Population Growth on the Turkish Economy" by Baron Tuncer (16).

In Turkey the press is about equally divided between supporting and disapproving the population policy, whereas the Iranian press is almost uniformly favorable.

The films on family planning produced by the two countries—"Eliff's Sorrow" (Turkey) and "Family Planning" (Iran)—are remarkably similar in being rather slow and emotional and con-

centrated on the family aspects; but whereas the Turkish film ends in tragedy, the Iranian film has a happy ending. Both have used the Population Council-sponsored Walt Disney films widely and with apparently good acceptance.

On the personal and group counseling aspect, Iran has spread its communication network widely and involves all government ministries, quasi-government organizations, the Revolutionary Corps, and voluntary organizations. Nearly 40,000 persons of various organizations have been exposed to education about family planning. A particularly effective movement has been to train 1,000 high school girls of the Women's Corps. These girls counsel women at urban and rural clinics and visit them at home.

In Turkey, because of the low profile of family planning work, training in motivational aspects has been limited to personnel within the Ministry of Health; some 5,000 to 6,000 have been oriented to family planning. Recently the Family Planning Association of Turkey has taken a major interest in the educational activities. The association has issued filmstrips and projectors to its provincial branches and organized a special educational team which holds public seminars in the main provincial centers. These seminars have been popular.

In both countries, women's organizations are active in family planning education—in Turkey particularly the University Women's Association and in Iran the Women's Organization, Women's Corps, Women's Literacy Corps, and Social Service Corps.

In an effort to determine the most effective means for disseminating public information to rural and urban areas, Iran has mounted an operational field research project at Isfahan. The objective is to determine the impact of an intensive information and education program on the knowledge and acceptance of family planning, using both the mass media and trained motivators.

Records and Reports

An individual card system of recording and reporting has been evolved in both programs. In Iran, two separate forms are used, a pink one for the IUD and a yellow one for the pill to record the personal and clinical information of the acceptor and the method. These forms are completed in duplicate by the midwife or the physician providing the service, and the duplicate is sent to the Provincial Family Planning or Provincial Health

Office at the end of the month. Book registers are also kept in various clinics to which personnel refer in compiling basic statistics. Additional forms are used for client identification and Papanicolaou smears.

A good practice is the compiling of statistics from the duplicate individual cards at the provincial level. The compilations are then forwarded to the Ministry to be incorporated in the national figures. Evaluation of the statistics is at an early stage; for example, the records are being used to determine the prevalence of abortion among clients. The forms need to be revised to eliminate duplication of clerical work at the clinics, and tabulating machinery has been requested.

Turkey has introduced computerization of the individual coupons received from the clinics for payment of incentives to medical and paramedical personnel for IUD insertions and for compilation of service statistics. The coupon is in triplicate; one coupon is retained by the clinic, one is forwarded to the provincial office, and a third is sent to the ministry. From these statistics, demographic characteristics of IUD acceptors have been analyzed by geographic area (17).

Research and KAP Studies

Demographic research has been carried out in both Iran (18,19) and Turkey (20). The School of Public Health, Ankara, has been engaged since 1963 in a coproject, the Turkish Demographic Survey (21–23), with the State Institute of Statistics conducting regular surveys throughout the country to obtain current demographic estimates in the absence of an effective vital statistics registration system.

KAP surveys have also been carried out in both Iran in 1966 and in Turkey in 1963 and in 1968. The KAP studies (24,25) on fertility and demographic characteristics conducted in Iran (1966) revealed the following data for selected areas.

1. Some 52 percent of the women living in rural areas are married before the age of 19 whereas only 41 percent of women in urban districts are married by this age.

2. The number of births in the 15–19 years age group is 316 per 1,000 married women in rural areas and 330 in Teheran. The number of births among married women of reproductive age (15–44 years) is 295 per 1,000 women in rural areas and 210 in Teheran.

3. Most women interviewed had heard of birth control; 33 percent of them had or their husbands

had used some method of contraception. Among these women, 68 percent did so to avoid having more children and 32 percent to achieve child spacing.

4. The methods known and used most frequently were the pill, condom, and coitus interruptus. Although from the survey, coitus interruptus appears to be used more often than any of the other methods, knowledge about the pill is more widely spread. Apparently there are other factors such as cost, availability, and doubts which inhibit greater use of the pill.

5. The majority feel that government dispensaries should provide information on birth control.

Two localized studies in Iran are of interest. Following 2 years of family planning in Iran's northeast city of Mashad (population 400,000), a survey of 1,000 households was conducted (12). This survey revealed 80 percent of women were married between 15 and 20 years of age, 41 percent had had abortions, 2 years was the common interval for child spacing, 96 percent considered family planning useful, and the ideal family size desired was two to four children.

The current methods used according to the women responding were the condom, 36 percent; pill, 32 percent; and IUD, 7 percent. The second study (26) of 1,957 families in the Kuyeh Nohomah Ahan District of Teheran showed a high degree of consanguinity; 599 unions were first-cousin marriages—a pointer to the need for change. These and other studies indicate the interest, enthusiasm, and concern of local personnel in fertility control.

In Turkey, the first KAP study (1) was conducted in 1963 and the second (14) in 1968. The 1968 study has revealed some interesting changes over the 5-year period.

1. Experience with contraceptive practice increased from 28 percent of married women in 1963 to 41 percent in 1968.

2. Current use of some method of contraception rose from 22 percent to 32 percent with a greater increase among older age groups.

3. The principal method that accounted for this increase was coitus interruptus (from 104 to 180 per 1,000 married women). The use of oral contraceptives and IUD's also increased (from 10 to 38 per 1,000 married women).

4. The number of admitted abortions (self-induced or with medical assistance) also showed a significant increase from 75 per 1,000 married women in 1963 to 102 in 1968.

5. On the other hand, the proportion of women who have had abortions among ever-users of contraception or abortion declined between 1963 and 1968 for all age groups except the groups 40–44 years of age, a consequence of increased contraceptive practice.

6. No significant change in values and attitudes concerning family planning was detected between the two surveys.

7. Knowledge about methods of contraception increased in the 5-year period—more in urban than in rural society. Even coitus interruptus is still unknown to at least half of the rural population.

A followup survey of 3,000 women, conducted by the General Directorate of Population Planning in 1969 (27), was concentrated upon the continuity of contraceptive practice. Only 57 percent of the sample, for one reason or another, could be interviewed; the interview rates were highest in the villages and lowest in provincial centers.

REFERENCES

- (1) Berelson, B.: Turkey: National survey on population. *Studies in Family Planning* 5: 1–5, December 1964.
- (2) Anderson, L. S.: Turkey. Country profiles. Population Council, New York, January 1970.
- (3) Friesen, J. K.: Iran. Country profiles. Population Council, New York, December 1969.
- (4) Iran: Report on population growth and family planning. *Studies in Family Planning* 20: 4–6, June 1967.
- (5) Pearson, L. B.: *Partners in development*. Frederick A. Praeger, Inc., New York, 1969, pp. 317–326.
- (6) Taylor, C. E., et al.: *Health manpower planning in Turkey: an international research case study*. Johns Hopkins University Press, Baltimore, 1968.
- (7) *Maternity care in the world. A report of a joint study of the International Federation of Gynaecology and Obstetrics and the International Confederation of Midwives*. Pergamon Publishing Co., New York, 1966.
- (8) *The state of food and agriculture*. Food and Agriculture Organization, Rome, 1967, 1968.
- (9) Momeni, D. A.: *The population of Iran: a dynamic analysis*. Doctoral dissertation. University of Texas, Austin, 1970.
- (10) *Fourth National Development Plan (1968–1972)*. Imperial Government of Iran, Plan Organization, Teheran, 1968.
- (11) *Second Five-Year Development Plan (1968–1972)*: Republic of Turkey, Prime Ministry State Planning Organization. Published by the Central Bank of the Republic of Turkey, Ankara, 1969.
- (12) Ministry of Health: *Iran Family Planning Bulletin*, No. 4, February 1970.
- (13) Declaration on population: the world leaders state-

- ment. *Studies in Family Planning* 26: 1-3, January 1968.
- (14) Shorter, F. C., et al.: Turkey: changes in birth control practices, 1963 to 1968. *Studies in Family Planning* 51: 1-7, March 1970.
 - (15) Ministry of Health and Social Affairs, Population Planning Directorate General: *Population Planning News, Quarterly Bulletin No. 5*, Ankara, April 1970.
 - (16) Tuncer, B.: The impact of population growth on the Turkish economy. Hacettepe University Publications, No. 3, Ankara, 1968.
 - (17) Ministry of Health and Social Affairs, Population Planning Directorate General: *Demographic characteristics of IUD acceptors*. No. 1-3, Ankara, 1967-69.
 - (18) Amani, M., et al.: Some demographic aspects of the population of Iran. Institute of Social Studies and Research, University of Teheran, 1968.
 - (19) Chasteland, J. C., and Amani, M.: *Projections de la population de Teheran de 1966 a 1991*. Institute of Social Studies and Research, University of Teheran, 1966.
 - (20) Fisek, N. H., and Shorter, F. C.: Fertility control in Turkey. *Demography* (special issue) 5: 578-589 (1968).
 - (21) The Turkish Demographic Survey: An outline of its goals, contents, control methods and implementation. School of Public Health, Ankara, 1966.
 - (22) Vital statistics from the Turkish demographic survey, 1966-67. Hacettepe University Press and the State Institute of Statistics, Planning Division, Ankara, 1970.
 - (23) Vital statistics, deaths in province and district centers, 1968. State Institute of Statistics, Publication No. 599, Ankara, 1970.
 - (24) Aminzadeh, F., et al.: Fertility and some KAP characteristics in rural areas of Iran. Institute of Social Studies and Research, University of Teheran, 1968.
 - (25) Aminzadeh, F., et al.: Fertility and some KAP characteristics in Teheran. Institute of Social Studies and Research, University of Teheran, 1969.
 - (26) Ministry of Health: *Iran Family Planning Bulletin*, No. 5, June 1970.
 - (27) Ministry of Health and Social Affairs, Population Planning Directorate General: *Population Planning News*, No. 7, Ankara, July 1970.

FENDALL, N. R. E. (Liverpool School of Tropical Medicine): *A comparison of family planning programs in Iran and Turkey*. *HSMHA Health Reports*, Vol. 86, November 1971, pp. 1011-1024.

While the population perspective in Iran is one of sustained high fertility associated with a declining mortality rate, Turkey has a falling fertility rate characterized by declining birth and death rates.

The family planning program in Iran is highly visible and is supported by a flexible and resourceful organization. The program in Turkey, although of longer duration, maintains a low profile and suffers from a degree of administrative inflexibility. The action program in Iran, unlike Turkey's, was not hindered by pronatalist legal statutes, and benefited from the national reform psychology engendered by the White Revolution (a series of reforms initiated in 1963 to reduce inequalities of wealth and social position). Neither program has as yet had any appreciable

effect on the birth rate.

Iran's programmatic family planning is stronger than that of Turkey, but Turkey has better demographic data and KAP (knowledge, attitudes, and practices) studies and better organization of service statistics. Educational programs are developing faster at all levels in Iran than in Turkey. Communication efforts in both countries are expanding but are more systematic and widespread in Iran. In Turkey use of the intrauterine device and mobile units to reach people are emphasized; in Iran oral contraceptives and fixed clinics predominate. A rough cost analysis showed Iran's program to be more effective, although evaluation aspects of both programs are weak. Voluntary activity is expanding in both countries, and both are experiencing similar

problems in determining spheres of activity for voluntary organizations. Abortions are prevalent in both countries.

The Iranian program, integrated within maternity and child health activities with action spread over voluntary, government, and quasi-government organizations and with a trend towards "beyond family planning," is vigorous, diversified, emphasizes programmatic aspects, and has the hallmarks of success. The Turkish program, by contrast, is stabilized at a low level of activity, is restricted in scope, and emphasizes population dynamics rather than programmatic aspects. If coitus interruptus and douching are accepted as reliable methods of birth control, then the acceptance of family planning in Turkey increased impressively between 1963 and 1968.